

WHAT IS CLAIMED IS:

1. An electronic circuit, comprising:
 - a diode-connected first transistor provided with a first control terminal;
 - a plurality of second transistors provided with second control terminals coupled to the first control terminal;
 - a plurality of third transistors, each being provided with a third control terminal coupled to a signal line, the third transistors being coupled in series with the corresponding second transistors; and
 - a fourth transistor provided with a fourth control terminal coupled to the first control terminal,
 - a current path formed of the third transistors that are set in the ON state by ON signals supplied via the signal lines and the second transistors coupled in series with the third transistors that are set in the ON state being coupled to a single output terminal, and the fourth transistor is not coupled to the single output terminal.
2. The electronic circuit according to claim 1, a gain coefficient of the fourth transistor being the same as a gain coefficient of the first transistor.
3. The electronic circuit according to claim 1, further comprising:
 - a fifth transistor provided with a fifth control terminal and coupled in series with the first transistor; and
 - a diode-coupled sixth transistor provided with a sixth control terminal coupled to the fifth control terminal.
4. An electronic circuit, comprising:
 - a diode-connected first transistor provided with a first control terminal;
 - a plurality of second transistors that output currents by using a voltage level of the first control terminal as a reference value;
 - a plurality of third transistors, each being provided with a third control terminal, that control currents output from the plurality of second transistors according to ON/OFF signals input into the third control terminals; and
 - a fourth transistor provided with a fourth control terminal and that outputs a current by using a voltage level of the first control terminal as the reference value,
 - the current output from the fourth transistor not flowing in a current path in which the currents output from the plurality of second transistors flow.
5. An electronic circuit, comprising:
 - a diode-connected first transistor provided with a first control terminal;

a plurality of second transistors that output currents by using a voltage level of the first control terminal as a reference value;

a plurality of third transistors, each being provided with a third control terminal, that control currents output from the plurality of second transistors according to ON/OFF signals input into the third control terminals; and

a fourth transistor provided with a fourth control terminal and that outputs a current by using a voltage level of the first control terminal as the reference value,

the fourth transistor not being disposed in a current path formed of the third transistors that are set in the ON state by the ON/OFF signals and the second transistors coupled in series with the third transistors that are set in the ON state.

6. The electronic circuit according to claim 4, a gain coefficient of the fourth transistor being the same as gain coefficient of the first transistor.

7. The electronic circuit according to claim 4, further comprising:

a fifth transistor provided with a fifth control terminal and coupled in series with the first transistor; and

a diode-connected sixth transistor provided with a sixth control terminal coupled to the fifth control terminal.

8. An electronic device, having a plurality of unit circuits, each of the plurality of unit circuits comprising:

a diode-connected first transistor provided with a first control terminal;

a plurality of second transistors provided with second control terminals coupled to the first control terminal;

a plurality of third transistors, each being provided with a third control terminal coupled to a signal line, coupled in series with corresponding second transistors; and

a fourth transistor provided with a fourth control terminal coupled to the first control terminal, the fourth transistor not being disposed in a current path formed of the third transistors that are set in the ON state by ON signals supplied via the signal lines and the second transistors coupled in series with the third transistors that are set in the ON state,

the fourth transistor being coupled to another unit circuit via a connecting line so as to control a voltage level of the first control terminal contained in said unit circuit according to the level of a current output from the fourth transistor.

9. The electronic device according to claim 8, a gain coefficient of the fourth transistor of each of the plurality of unit circuits being the same as a gain coefficient of the first transistor.

10. The electronic device according to claim 8, each of the plurality of unit circuits further comprising:

a fifth transistor provided with a fifth control terminal and coupled in series with the first transistor; and

a diode-connected sixth transistor provided with a sixth control terminal coupled to the fifth control terminal.

11. An electronic device having a plurality of unit circuits, each of the plurality of unit circuits comprising:

a diode-connected first transistor provided with a first control terminal;

a plurality of second transistors that output currents by using a voltage level of the first control terminal as a reference value;

a plurality of third transistors, each being provided with a third control terminal, that control currents output from the plurality of second transistors according to ON/OFF signals input into the third control terminals; and

a fourth transistor provided with a fourth control terminal and that outputs a current by using the voltage level of the first control terminal as the reference value,

the current output from the fourth transistor being supplied to another unit circuit without being supplied to a current path formed of the second transistors coupled in series with the third transistors that are set in the ON state by the ON/OFF signals.

12. An electronic device having a plurality of unit circuits, each of the plurality of unit circuits comprising:

a diode-connected first transistor provided with a first control terminal;

a plurality of second transistors that output currents by using a voltage level of the first control terminal as a reference value;

a plurality of third transistors, each being provided with a third control terminal, that control currents output from the plurality of second transistors according to ON/OFF signals input into the third control terminals; and

a fourth transistor provided with a fourth control terminal and that outputs a current by using the voltage level of the first control terminal as the reference value,

the current output from the fourth transistor serving as a reference current that sets a voltage level of the first control terminal of another unit circuit.

13. The electronic device according to claim 11, a gain coefficient of the fourth transistor of each of the plurality of unit circuits being the same as a gain coefficient of the first transistor.

14. The electronic device according to claim 11, the plurality of unit circuits being cascade-connected.

15. An electronic device according to claim 11, each of the plurality of unit circuits further comprising:

a fifth transistor provided with a fifth control terminal and coupled in series with the first transistor; and

a diode-connected sixth transistor provided with a sixth control terminal coupled to the fifth control terminal.

16. An electronic device having a plurality of unit circuits, each of the plurality of unit circuits comprising:

a diode-connected first transistor provided with a first control terminal;

a plurality of second transistors that outputs currents by using a voltage level of the first control terminal as a reference value;

a plurality of third transistors, each being provided with a third control terminal, that outputs currents output from the plurality of second transistors according to ON/OFF signals input into the third control terminals;

a fourth transistor provided with a fourth control terminal and that outputs a current by using the voltage level of the first control terminal as the reference value;

a fifth transistor provided with a fifth control terminal and coupled in series with the first transistor; and

a diode-connected sixth transistor provided with a sixth control terminal coupled to the fifth control terminal,

the fourth transistor not being coupled to the second transistors coupled in series with the third transistors that are set in the ON state by the ON/OFF signals of the unit circuit containing the fourth transistor, but being coupled to the sixth transistor contained in another unit circuit.

17. The electronic device according to claim 16, a gain coefficient of the fourth transistor of each of the plurality of unit circuits being the same as a gain coefficient of the first transistor.

18. The electronic device according to claim 16, the plurality of unit circuits being cascade-connected.

19. An electro-optical apparatus having a plurality of scanning lines, a plurality of data lines, electro-optical devices disposed at intersections between the plurality of scanning lines and the plurality of data lines, and a data-current supply circuit that supplies a data

current to the plurality of data lines, so as to supply a drive current having an amount corresponding to the data current to each of the electro-optical devices, each of the data-current supply circuit comprising:

a diode-connected first transistor provided with a first control terminal;

a plurality of second transistors provided with second control terminals coupled to the first control terminal;

a plurality of third transistors, each being provided with a third control terminal coupled to a signal line through which image data is supplied, coupled in series with the corresponding second transistors; and

a fourth transistor provided with a fourth control terminal coupled to the first control terminal,

the fourth transistor being coupled to another data-current supply circuit via a connecting line so as to control a voltage level of the first control terminal contained in said data-current supply circuit according to a level of a current output from the fourth transistor.

20. The electro-optical apparatus according to claim 19, a gain coefficient of the fourth transistor being the same as a gain coefficient of the first transistor.

21. The electro-optical apparatus according to claim 19, the data-current supply circuit further comprising:

a fifth transistor provided with a fifth control terminal and coupled in series with the first transistor; and

a diode-connected sixth transistor provided with a sixth control terminal coupled to the fifth control terminal.

22. An electro-optical apparatus having a plurality of scanning lines, a plurality of data lines, electro-optical devices disposed at intersections between the plurality of scanning lines and the plurality of data lines, and data-current supply circuits that supply data currents to the plurality of data lines, so as to supply a drive current having an amount corresponding to the data current to each of the electro-optical devices, each of the data-current supply circuit comprising:

a diode-connected first transistor provided with a first control terminal;

a plurality of second transistors that output currents by using a voltage level of the first control terminal as a reference value;

a plurality of third transistors, each being provided with a third control terminal, that control currents output from the plurality of second transistors according to image data input into the third control terminals; and

a fourth transistor provided with a fourth control terminal and that outputs a current by using the voltage level of the first control terminal as the reference value,

the current output from the fourth transistor being supplied to another data-current supply circuit without being supplied to a current path formed of the second transistors coupled in series with the third transistors that are set in the ON state by the image data.

23. An electro-optical apparatus having a plurality of scanning lines, a plurality of data lines, electro-optical devices disposed at intersections between the plurality of scanning lines and the plurality of data lines, and data-current supply circuits that supply data currents to the plurality of data lines, so as to supply a drive current having an amount corresponding to the data current to each of the electro-optical devices, each of the data-current supply circuit comprising:

a diode-connected first transistor provided with a first control terminal;

a plurality of second transistors that output currents by using a voltage level of the first control terminal as a reference value;

a plurality of third transistors, each being provided with a third control terminal, that controls the currents output from the plurality of second transistors according to image data input into the third control terminals; and

a fourth transistor provided with a fourth control terminal and that outputs a current by using the voltage level of the first control terminal as the reference value,

the current output from the fourth transistor serving as a reference current that sets a voltage level of the first control terminal of another data-current supply circuit.

24. The electro-optical apparatus according to claim 22, a gain coefficient of the fourth transistor of each of the plurality of data-current supply circuits being the same as a gain coefficient of the first transistor.

25. The electro-optical apparatus according to claim 22, the plurality of data-current supply circuits being cascade-connected.

26. The electro-optical apparatus according to claim 22, each of the current-supply circuits further comprising:

a fifth transistor provided with a fifth control terminal and coupled in series with the first transistor; and

a diode-connected sixth transistor provided with a sixth control terminal coupled to the fifth control terminal.

27. An electro-optical apparatus comprising a plurality of scanning lines, a plurality of data lines, electro-optical devices disposed at intersections between the plurality of scanning lines and the plurality of data lines, and data-current supply circuits that supply data currents to the plurality of data lines, so as to supply a drive current having an amount corresponding to the data current to each of the electro-optical devices, each of the data-current supply circuits comprising:

a diode-connected first transistor provided with a first control terminal;

a plurality of second transistors that output currents by using a voltage level of the first control terminal as a reference value;

a plurality of third transistors, each being provided with a third control terminal, that control the currents output from the plurality of second transistors according to ON/OFF signals input into the third control terminals;

a fourth transistor provided with a fourth control terminal and that output a current by using the voltage level of the first control terminal as the reference value;

a fifth transistor provided with a fifth control terminal and coupled in series with the first transistor; and

a diode-connected sixth transistor provided with a sixth control terminal coupled to the fifth control terminal,

the fourth transistor not being coupled to the second transistors coupled in series with the third transistors that are set in the ON state by the ON/OFF signals of a unit circuit containing the fourth transistor, but is coupled to the sixth transistor contained in another data-current supply circuit.

28. The electro-optical apparatus according to claim 27, a gain coefficient of the fourth transistor of each of the data-current supply circuits being the same as a gain coefficient of the first transistor.

29. The electro-optical apparatus according to claim 27, the plurality of data-current supply circuits being cascade-connected.

30. The electro-optical apparatus according to claim 27, the data-current supply circuit further comprising:

a fifth transistor provided with a fifth control terminal and coupled in series with the first transistor; and

a diode-connected sixth transistor provided with a sixth control terminal coupled to the fifth control terminal.

31. The electro-optical apparatus according to claim 30, a gain coefficient of the sixth transistor being the same as a gain coefficient of the first transistor.

32. The electro-optical apparatus according to claim 19, the electro-optical devices being EL devices.

33. The electro-optical apparatus according to claim 32, the EL devices each including a light-emission layer formed of an organic material.

34. An electronic unit comprising the electronic device set forth in claim 8.

35. An electronic unit comprising the electro-optical apparatus set forth in claim 19.